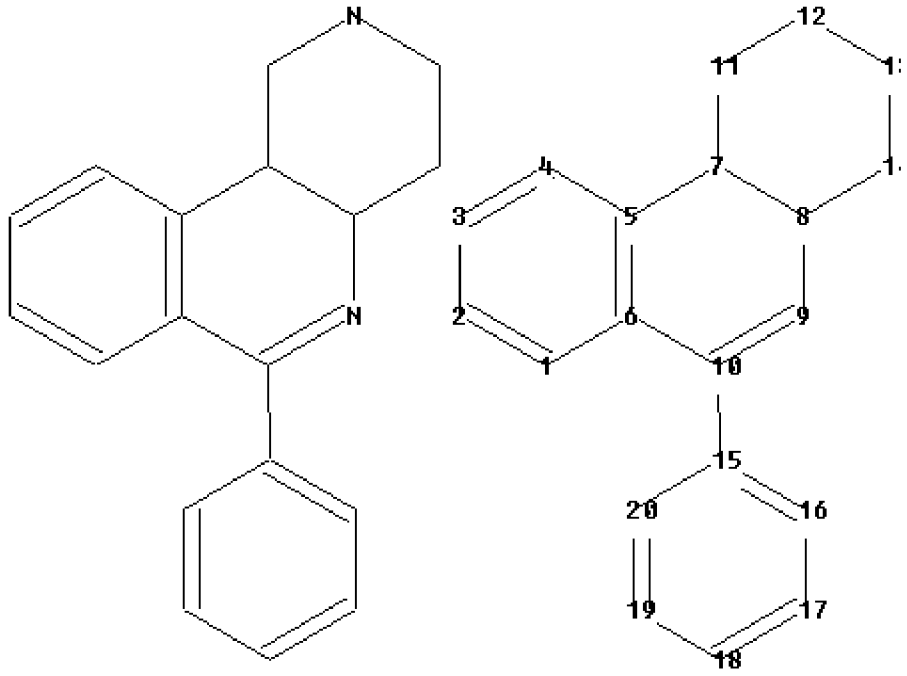
L1 STRUCTURE UPLOADED

Uploading C:\Program Files\STNEXP\Queries\10591955 full search 982009.str

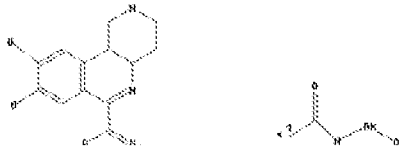


L2 345 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:35:24 ON 08 SEP 2009
L3 115 S L2
L4 90 S L3 AND (PY<2004 OR AY<2004 OR PRY<2004)

FILE 'REGISTRY' ENTERED AT 15:52:07 ON 08 SEP 2009
L5 STRUCTURE UPLOADED

Uploading C:\Program Files\STNEXP\Queries\10591955 cl 2 search 982009.str



chain nodes :

L6 0 S L5 SSS SAM
L7 0 S L5 SSS FULL

FILE 'CAPLUS' ENTERED AT 15:53:21 ON 08 SEP 2009

L8 1 S US 20070208051/PN

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of phenyl benzonaphthyridine derivatives as PDE3/4 inhibitors
ACCESSION NUMBER: 2005:1049863 CAPLUS Full-text
DOCUMENT NUMBER: 143:347067
TITLE: Preparation of phenyl benzonaphthyridine derivatives
as PDE3/4 inhibitors
INVENTOR(S): Kautz, Ulrich; Hatzelmann, Armin; Barsig, Johannes;
Marx, Degenhard; Kley, Hans-Peter; Flockerzi, Dieter
PATENT ASSIGNEE(S): Altana Pharma A.-G., Germany
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090345	A1	20050929	WO 2005-EP51204	20050316
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2005223386	A1	20050929	AU 2005-223386	20050316
CA 2559200	A1	20050929	CA 2005-2559200	20050316
EP 1732925	A1	20061220	EP 2005-717070	20050316
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				

IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR,
AL, BA,
HR, LV, MK, YU

FILE 'REGISTRY' ENTERED AT 15:53:49 ON 08 SEP 2009
L9 1 S 865355-32-4/RN
SET NOTICE 1 DISPLAY
SET NOTICE LOGIN DISPLAY

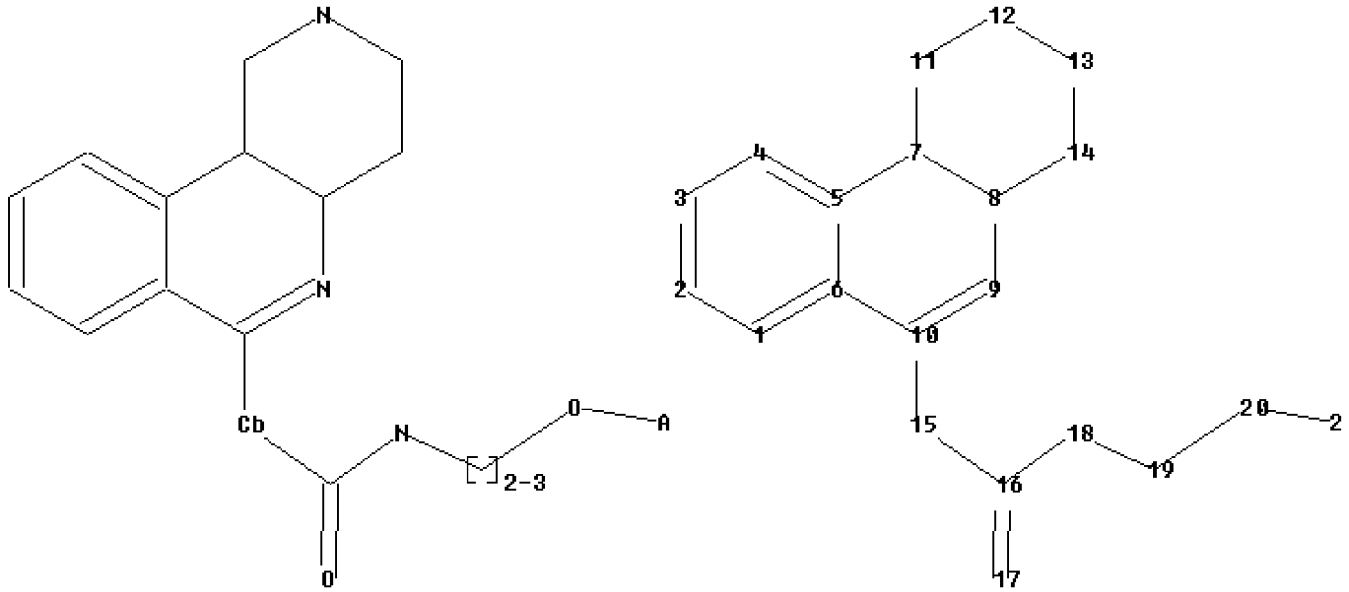
FILE 'REGISTRY' ENTERED AT 15:59:03 ON 08 SEP 2009
L10 STRUCTURE UPLOADED
L11 294 S L10 SSS FULL

FILE 'CAPLUS' ENTERED AT 16:00:17 ON 08 SEP 2009
L12 113 S L11
L13 88 S L12 AND (PY<2004 OR AY<2004 OR PRY<2004)

FILE 'REGISTRY' ENTERED AT 16:01:43 ON 08 SEP 2009
L14 STRUCTURE UPLOADED
L15 0 S L14 SSS FULL

L1 STRUCTURE UPLOADED
L2 0 S L1 SSS SAM
L3 0 S L1 SSS FULL

Uploading C:\Program Files\STNEXP\Queries\10591955 cl2 992009 search
12.str



FILE 'REGISTRY' ENTERED AT 14:36:02 ON 09 SEP 2009
L4 STRUCTURE UPLOADED
L5 0 S L4 SSS SAM
L6 48 S L4 SSS FULL

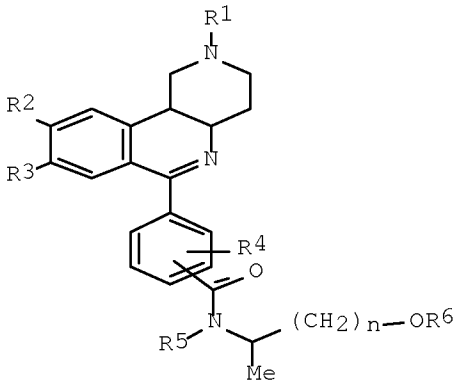
FILE 'HCAPLUS' ENTERED AT 14:36:55 ON 09 SEP 2009

L7 2 S L6
L8 2 S L7 AND (PY<2005 OR AY<2005 OR PRY<2005)
L9 1 S L7 AND (PY<2004 OR AY<2004 OR PRY<2004)

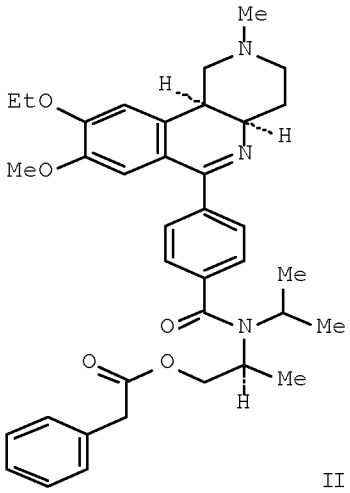
L9 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of phenylbenzonaphthyridine derivatives as PDE3/4 inhibitors
ACCESSION NUMBER: 2004:220332 HCAPLUS Full-text
DOCUMENT NUMBER: 140:270839
TITLE: Preparation of phenylbenzonaphthyridine derivatives as PDE3/4 inhibitors
INVENTOR(S): Flockerzi, Dieter; Hummel, Rolf-peter; Reutter, Felix; Flockerzi, Dieter; Hummel, Rolf-peter; Reutter, Felix
PATENT ASSIGNEE(S): Altana Pharma Ag, Germany
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004022557	A1	20040318	WO 2003-EP9617	20030829 <--
W: AE, AL, AU, BA, BR, CA, CN, CO, DZ, EC, GE, HR, ID, IL, IN, IS, JP, KR, LT, LV, MA, MK, MX, NO, NZ, PH, PL, SG, TN, UA, US, VN, YU, ZA, ZW				
RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
CA 2496731	A1	20040318	CA 2003-2496731	20030829 <--
AU 2003264132	A1	20040329	AU 2003-264132	20030829 <--
EP 1537109	A1	20050608	EP 2003-793772	20030829 <--
EP 1537109	B1	20070418		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005539055	T	20051222	JP 2004-533426	20030829 <--
AT 360021	T	20070515	AT 2003-793772	20030829 <--
ES 2286494	T3	20071201	ES 2003-793772	20030829 <--
US 20060167034	A1	20060727	US 2005-525566	20050225 <--

US 7470704 B2 20081230
US 20090030029 A1 20090129 US 2008-232708
20080923 <--
PRIORITY APPLN. INFO.: EP 2002-19904 A
20020904 <--
US 2002-407689P P
20020904 <--
WO 2003-EP9617 W
20030829 <--
US 2005-525566 A1
20050225
OTHER SOURCE(S): MARPAT 140:270839
GI



I



II

L10 1 S L8 NOT L9

AB Title compds. I [R1 = alkyl; R2 and R3 independently = OH, alkoxy, cycloalkoxy, etc. or R2 and R3 together are alkylenedioxy group; R4 = H, halo, NO2, etc.; R5 = H, alkyl, phenylalkyl, etc.; R6 = alkyl, phenylalkyl or (un)substituted arylalkyl; R7 = alkyl and n = 1-2 or R7 = H and n = 1-3] and their pharmaceutically acceptable salts, are prepared and disclosed as inhibitors of PDE3/4. Thus, e.g., II was prepared by amidation of 4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydrobenzo[c][1,6]naphthyridin-6-yl)benzoic acid (preparation given) with 3-isopropoxypropyl-amine. The inhibitory activity of I towards PDE3 and PDE4 was evaluated using radioactive enzyme assays and it was revealed that compds. of the invention possessed -log IC50 values in the range of 7.8 up to 9.9 mol/L for PDE4 and in the range of 5.8 up to 7.8 mol/L for PDE3. I as inhibitor of PDE3/4 should prove useful in the treatment of respiratory disorders and dermatoses. Pharmaceutical compns. comprising I are disclosed.

ACCESSION NUMBER: 2005:1049863 HCAPLUS Full-text
DOCUMENT NUMBER: 143:347067

TITLE: Preparation of phenyl benzonaphthyridine derivatives
as PDE3/4 inhibitors
INVENTOR(S): Kautz, Ulrich; Hatzelmann, Armin; Barsig, Johannes;
Marx, Degenhard; Kley, Hans-Peter; Flockerzi, Dieter
PATENT ASSIGNEE(S): Altana Pharma A.-G., Germany
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090345	A1	20050929	WO 2005-EP51204	20050316 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2005223386	A1	20050929	AU 2005-223386	20050316 <--
CA 2559200	A1	20050929	CA 2005-2559200	20050316 <--
EP 1732925	A1	20061220	EP 2005-717070	20050316 <--
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, LV, MK, YU				
JP 2007529471	T	20071025	JP 2007-503345	20050316 <--
US 20070208051	A1	20070906	US 2006-591955	20060908 <--

PRIORITY APPLN. INFO.: EP 2004-101101 A

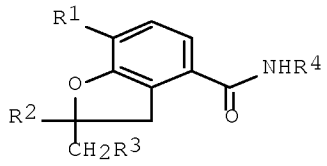
20040317 <--
EP 2004-101111 A
20040318 <--
WO 2005-EP51204 W
20050316
OTHER SOURCE(S): CASREACT 143:347067; MARPAT 143:347067

FILE 'MARPAT' ENTERED AT 14:39:40 ON 09 SEP 2009
L11 1 S L6
L12 0 S L11 NOT L8

FILE 'WPIX' ENTERED AT 14:40:40 ON 09 SEP 2009
L13 0 S L6

FILE 'HCAPLUS' ENTERED AT 14:41:38 ON 09 SEP 2009
E FLOCKERZI D?/AU
SET EXPAND CONTINUOUS
L14 119 S E4-E5
L15 47 S L14 AND PHOSPHODIESTERASE?
L16 41 S L15 AND (PY<2004 OR AY<2004 OR PRY<2004)
L17 3 S L15 AND (RESPIRATION OR ASTHMA OR BRONCHITIS OR COPD)
L18 1 S L17 AND (PY<2004 OR AY<2004 OR PRY<2004)

L18 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of phosphodiesterase-inhibiting dihydrobenzofurancarboxamides
GI



I

AB The title compds. [I; R1 = (un)substituted alkoxy, cycloalkoxy, PhCH2O, etc.; R2 = alkyl; R3 = H, alkyl; R4 = (un)substituted Ph, pyridyl, etc.], which are potent phosphodiesterase (PDE) inhibitors, useful for the treatment of respiratory diseases [e.g., asthma (no data)] and dermatoses (no data), are prepared Thus, 4-amino-3,5-dichloropyridine was reacted with NaH and 2,3-dihydro-2,2-dimethyl-7-methoxy-4- benzofurancarboxylic acid, producing N-3,5-dichloro-4-pyridyl 2,3-dihydro-2,2-dimethyl-7-methoxy-4-benzofurancarboxamide, m.p. 140-142°, which demonstrated a log IC50 against PDE-IV of 8.47.
IC ICM C07D401-12
ICS C07D307-94; C07D307-79; A61K031-34; A61K031-44
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1
ST dihydrobenzofurancarboxamide prepn inhibitor phosphodiesterase;

antiasthmatic prepn phosphodiesterase inhibitor
dihydrobenzofurancarboxamide
IT Skin, disease
(dermatoses; phosphodiesterase-inhibiting
dihydrobenzofurancarboxamides for treatment of)
IT Respiratory tract
(disease, phosphodiesterase-inhibiting
dihydrobenzofurancarboxamides for treatment of)
IT 177429-18-4P 177429-19-5P 177429-20-8P 177429-21-9P
177429-22-0P
177429-23-1P 177429-24-2P 177429-58-2P
RL: BAC (Biological activity or effector, except adverse); BSU
(Biological
study, unclassified); SPN (Synthetic preparation); THU
(Therapeutic use);
BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of phosphodiesterase-inhibiting

L18 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of phosphodiesterase-inhibiting
dihydrobenzofurancarboxamides
ACCESSION NUMBER: 1996:345409 HCAPLUS Full-text
DOCUMENT NUMBER: 125:10630
ORIGINAL REFERENCE NO.: 125:2337a,2340a
TITLE: Preparation of phosphodiesterase-inhibiting
dihydrobenzofurancarboxamides
INVENTOR(S): Amschler, Hermann; Flockerzi, Dieter;
Gutterer, Beate; Hatzelmann, Armin; Schudt,
Christian;
Beume, Rolf; Haefner, Dietrich; Kley, Hans-
Peter;
Ulrich, Wolf-Ruediger; Thibaut, Ulrich
PATENT ASSIGNEE(S): Byk Gulden Lomberg Chemische Fabrik Gmbh,
Germany
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9603399	A1	19960208	WO 1995-EP2841	19950719 <--
W: AU, BG, BR, BY, CA, CN, CZ, EE, FI, HU, JP, KR, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2195663	A1	19960208	CA 1995-2195663	19950719 <--
CA 2195663	C	20061024		
AU 9531153	A	19960222	AU 1995-31153	

19950719 <--
AU 702346 B2 19990218
EP 772610 A1 19970514 EP 1995-926953
19950719 <--
EP 772610 B1 20001004
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
CN 1159804 A 19970917 CN 1995-195177
19950719 <--
CN 1068879 C 20010725
JP 10503484 T 19980331 JP 1996-505439
19950719 <--